

NWS Form E-5 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE MONTHLY REPORT OF HYDROLOGIC CONDITIONS	HYDROLOGIC SERVICE AREA: Pocatello, Idaho (PIH)
	REPORT FOR: MONTH: January YEAR: 2017
TO: Hydrologic Operations Division, W/OH2 National Weather Service National Oceanic and Atmospheric Administration Silver Spring, Maryland 20910	SIGNATURE Travis Wyatt Service Hydrologist / Acting DATE: February 15, 2017
When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (NWS Instruction 10-924).	



An X in this box indicates that no flooding has occurred for the month within this hydrologic service area.

Overview:

January was another banner month for precipitation and snowfall. There were records for precipitation and snowfall in January. Most of the area, excluding only our Northeast corner, was 200 to 400 percent of normal precipitation. Monthly total rainfall was 5.19 inches in Picabo and 4.53 inches in Bern. There were 4 precipitation records for our 5 climate locations. There were 2 snowfall records for Pocatello airport. It was very cold across the area for the month of January with most of the area running 6 to 10 degrees below normal. Some areas were significantly colder. Challis was 16 degrees below normal. Eleven low temperature records were broken as well for our 5 climate locations. Mean average temperatures ranged from 0 degrees F for Stanley to 23 degrees F for Oakley across the HSA.

There was a brief warm up from approximately the 8th to the 11th with rain on snow for lower elevations contributing to flooding across the area. Cassia county had flooding to many homes as well as many county roads were closed. There was some street flooding in Heyburn, Bancroft, near SwanLake, and Hailey. Furthermore, there was nuisance street flooding in urban areas for Bingham, Bonneville, and Lincoln counties. Also, there was ice jam that flooded a park on the Salmon river near Challis. Another ice jam caused minor flooding to a couple of homes on the Lost River near Darlington. Additionally, an ice jam on the Birch creek caused flooding of Hwy 28 on the border of Lemhi and Clark counties.

As far as the short-term 8 to 14 day Climate Prediction Center Outlook is concerned, the eastern Idaho forecast is for mostly 50 percent below normal temperatures and 33 to 40 percent chance of above normal precipitation. The one-month forecast graphics are below. For the three-month outlook, the temperature forecast is equal chances for above or below normal. As for three-month outlook for precipitation, the outlook continues to be good news with a 33 to 40 percent chance of above normal precipitation pattern across most of eastern Idaho.

Of the data available for the month, the stations within the HSA reaching the highest 24-hour temperatures were Howe and Shoshone COOP stations reaching 46°F and 44°F respectively both on the 9th. The station (non-SNOTEL and non-RAWS) with the lowest recorded temperature was the Stanley COOP station at -43°F on the 13th. The highest recorded 24-hr precipitation (non-SNOTEL) occurred at the Preston COOP station where 1.07 inches fell on the 4th. The highest recorded monthly precipitation total (non-SNOTEL) occurred at Picabo, Bellevue and Bern where 5.19, 5.12 and 4.53 total inches respectively were recorded. The basins receiving the greatest precipitation were the Portneuf, Big Lost River at Mackay, Blackfoot, Little Wood, and the Snake River above Palisades basins receiving 162%, 154 %, 154%, 152 %, and 152% of average precipitation

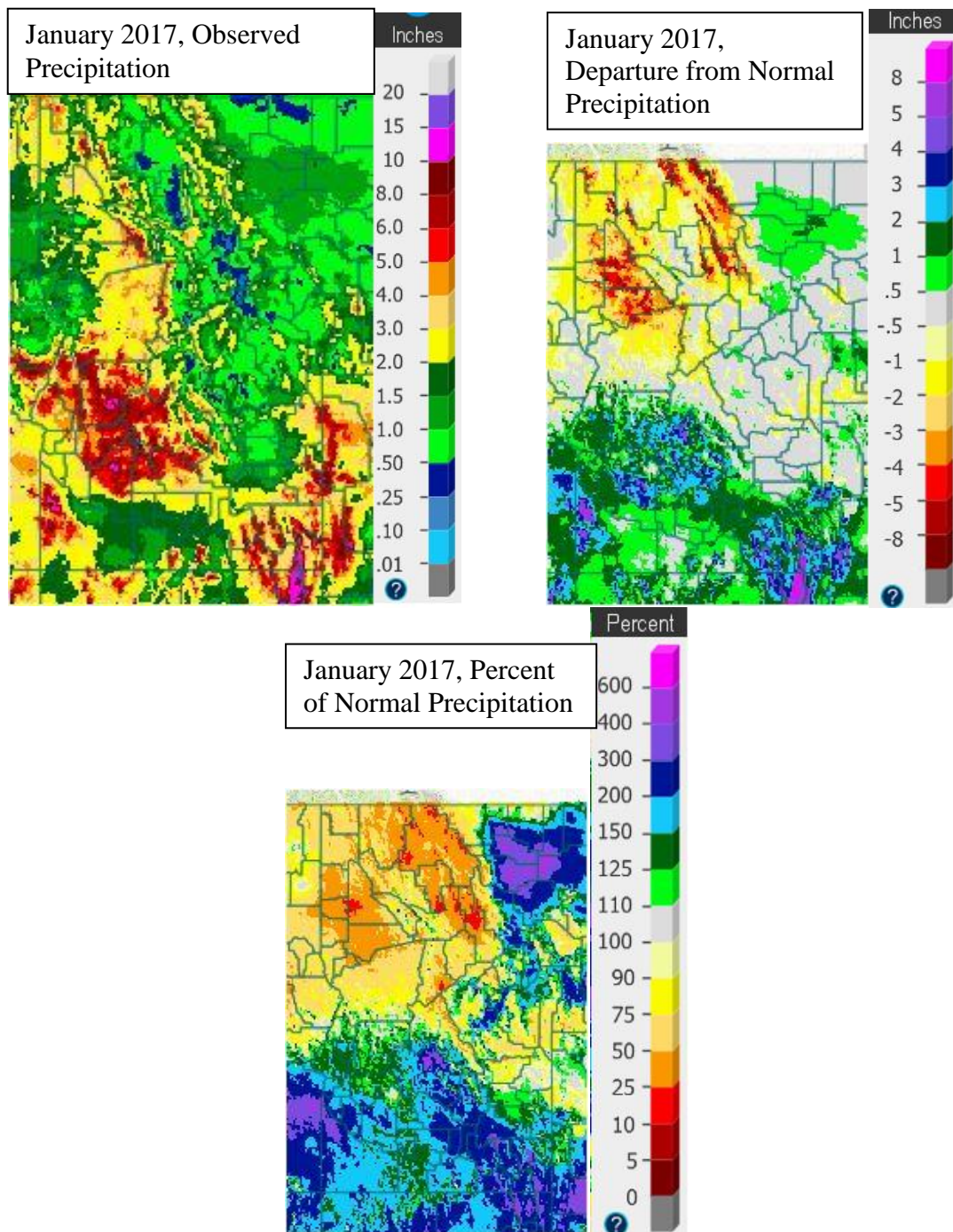
respectively for the month of January-based on SNOTEL data. All river basins in our area were above average for the month.

Reservoirs last month decreased capacity overall by around 11% in the upper Snake River basin system and is currently sitting at 63% of capacity overall. Compared to last year at this time, it was about 58% of capacity. According to the Natural Resources Conservation Service and U.S. Bureau of Reclamation reservoir data, the most notable decrease in storage capacity was the American Falls reservoir as well as the Little Wood reservoir decreasing percent capacity by 15% as well as 12% respectively. Milner increased storage by 2%. Only Lake Walcott remained unchanged, all other reservoirs showed decreases in storage capacity. The Mackay and Little Wood reservoirs currently have the highest percent of average at 148 and 145 respectively, and Palisades reservoir is at the lowest at 70% of average.

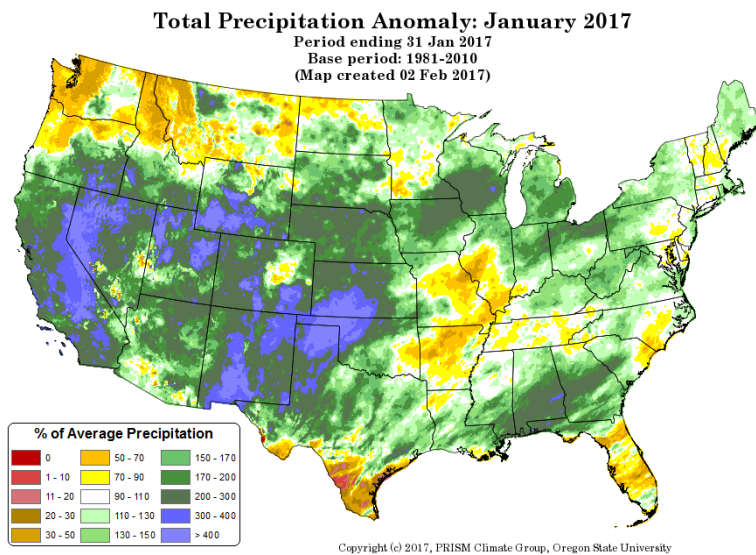
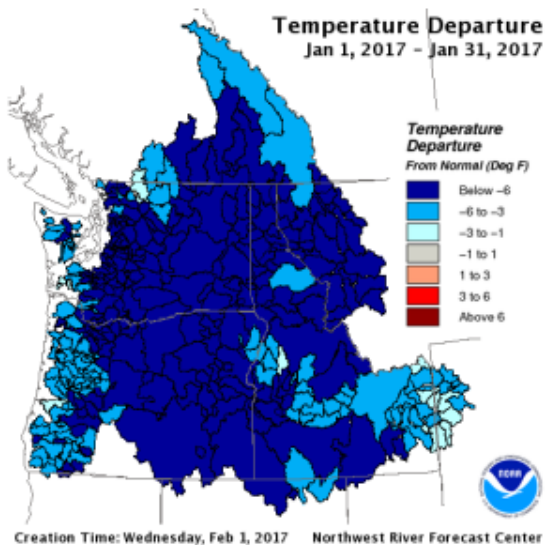
Current streamflow conditions in eastern Idaho are remain near normal in the mountains and below normal for the Snake River plain for monthly streamflows of the unregulated streams (see USGS streamflow graphic below).

Because of well above normal precipitation, drought conditions across eastern Idaho have remained very low in January as reflected on the latest U.S. Drought Monitor. Currently, 1.87 percent of the state is in Abnormally Dry drought status with about .04% of the state in Moderate Drought, which is unchanged from last month. The latest update of the U.S. Seasonal Drought Outlook shows continued improvement for the eastern Idaho's drought outlook forecast.

Precipitation:

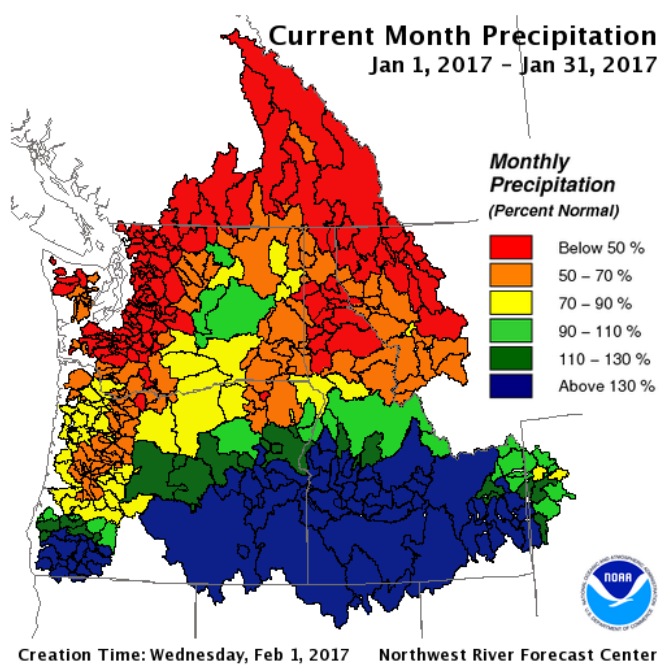
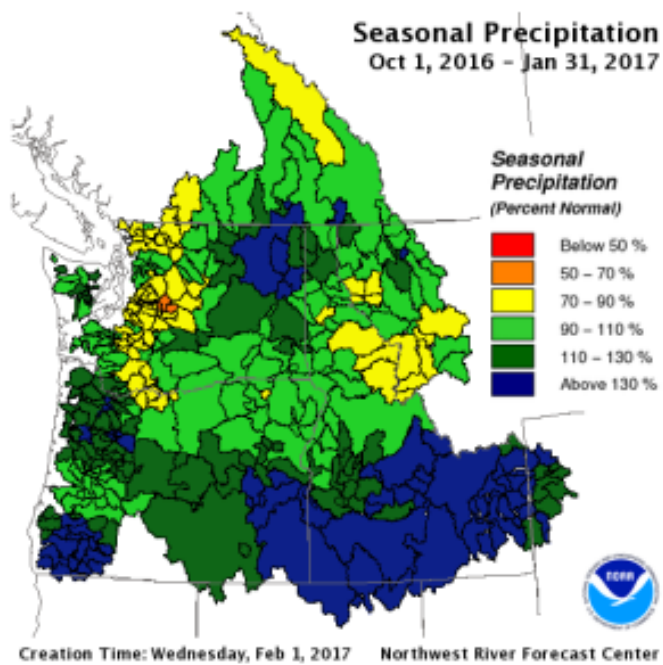


www.water.weather.gov/precip/#



https://www.nwrfc.noaa.gov/WAT_RES_wy_summary/20170101/CurMonMAT_2016Dec31_2017010117.png

<http://prism.oregonstate.edu/comparisons/anomalies.php>



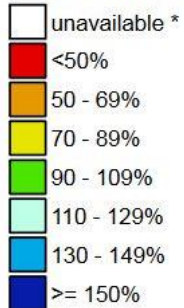
https://www.nwrfc.noaa.gov/WAT_RES_wy_summary/20170101/SeasonalMAP_WY2017_OCT_DEC.2017010117.png

https://www.nwrfc.noaa.gov/WAT_RES_wy_summary/20170101/CurMonMAP_2016Dec31_2017010117.png

Westwide SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

Feb 13, 2017

Water Year (Oct 1)
to Date Precipitation
Basin-wide Percent
of 1981-2010 Average



* Data unavailable
at time of posting
or measurement
is not representative
at this time of year

Provisional data
subject to revision



0 75 150 300 Miles

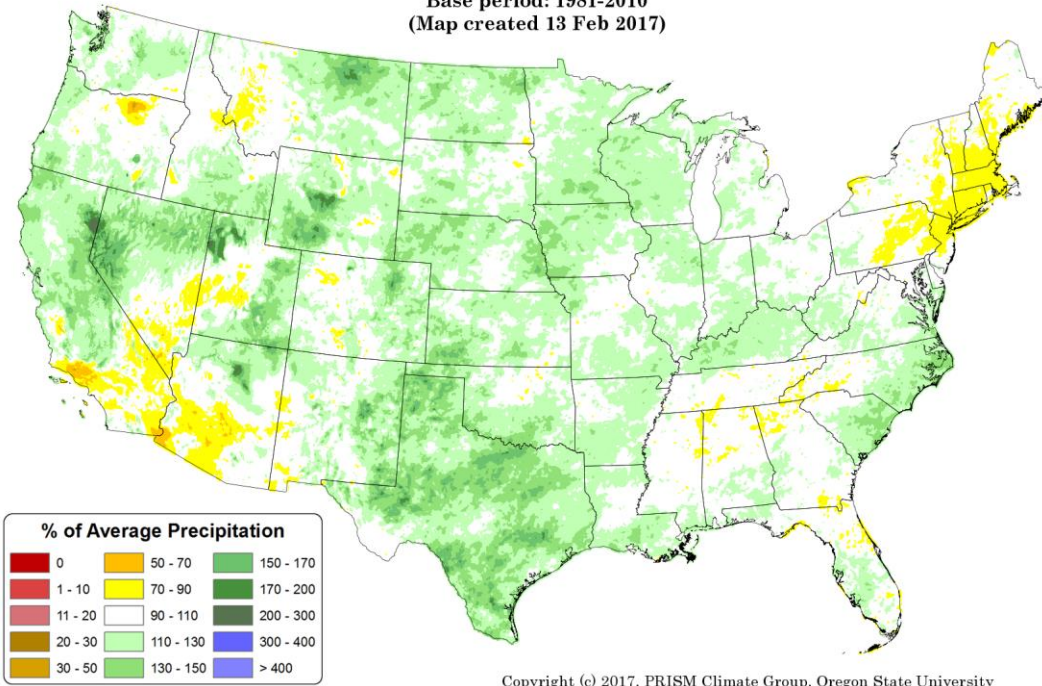
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west_wytdprecpcnormal_update.pdf

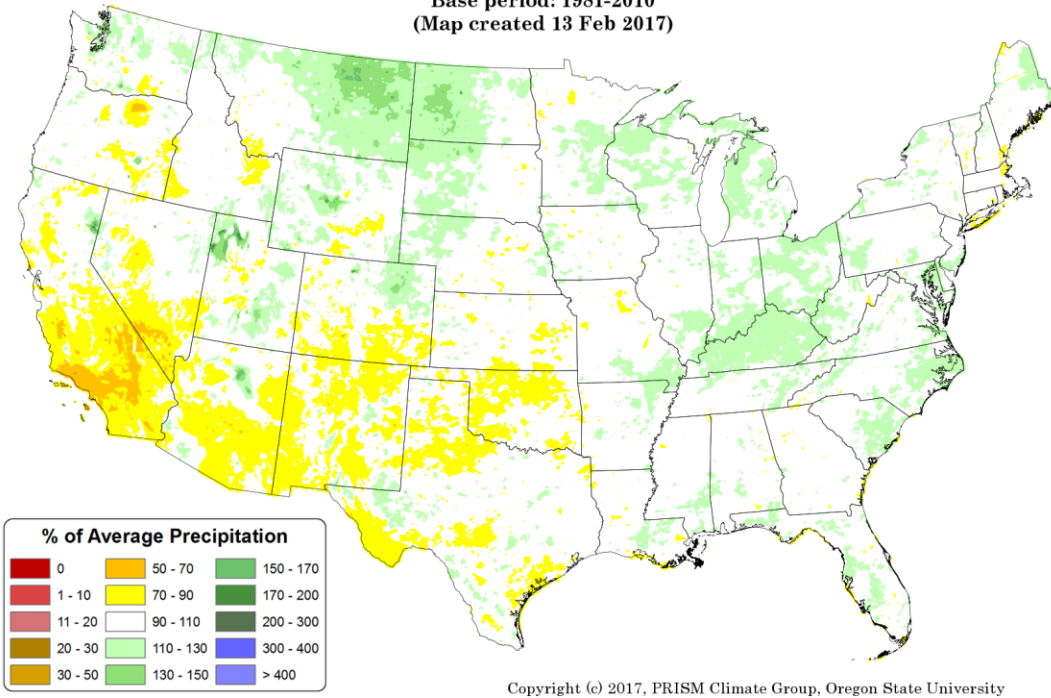
Past 2 Years of Precipitation % of Average:

Total Precipitation Anomaly: February 2015 - 12 February 2017
 Period ending 7 AM EST 12 Feb 2017
 Base period: 1981-2010
 (Map created 13 Feb 2017)



Past 6 Years of Precipitation % of Average:

Total Precipitation Anomaly: February 2011 - 12 February 2017
 Period ending 7 AM EST 12 Feb 2017
 Base period: 1981-2010
 (Map created 13 Feb 2017)



www.prism.oregonstate.edu/comparisons/drought.php

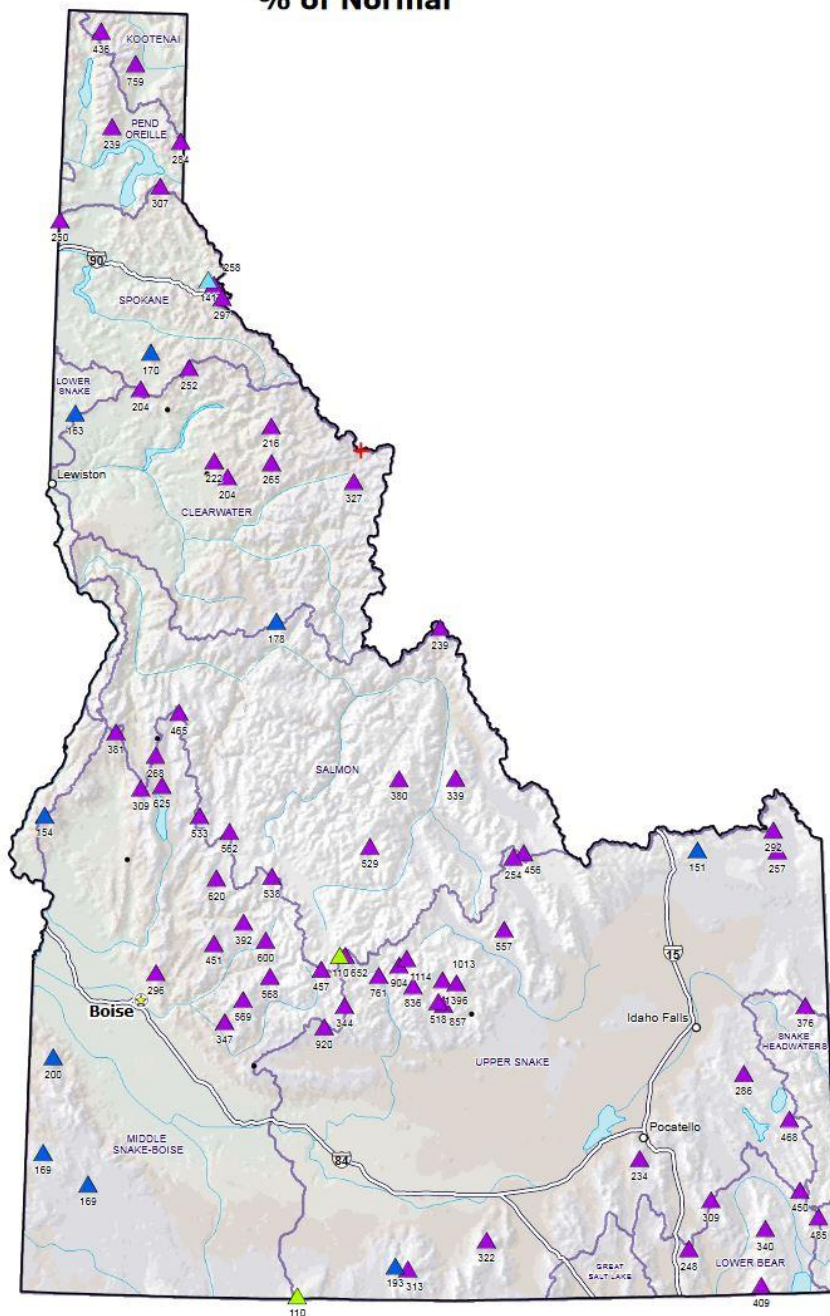
Idaho SNOTEL Month to Date (MTD) Precipitation % of Normal

Feb 13, 2017

Current MTD
Precipitation
% of 1981-2010
Average

- ▲ > 200%
- ▲ 150-200%
- ▲ 125-149%
- ▲ 100-124%
- ▲ 75-99%
- ▲ 50-74%
- ▲ 25-49%
- ▲ 1-24%
- ▲ 0%
- Unavailable*

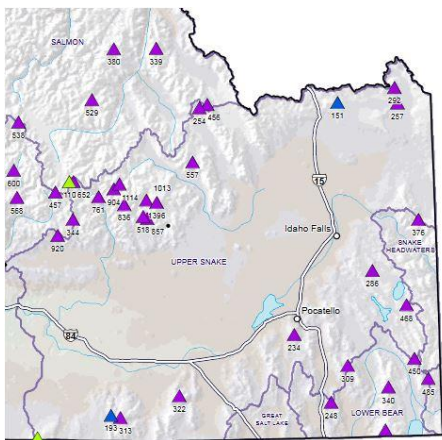
*Provisional Data
Subject to Revision*



Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

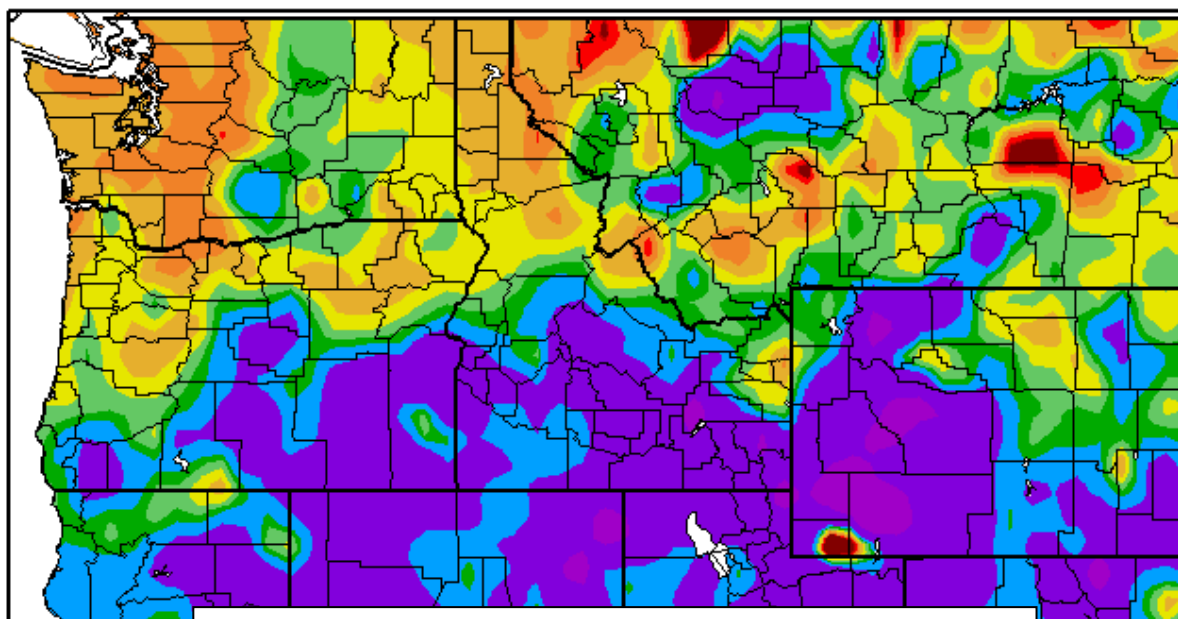
** Data unavailable at time of posting or
unavailable long-term normal.*

http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/id_mtdprecpcnormal.pdf

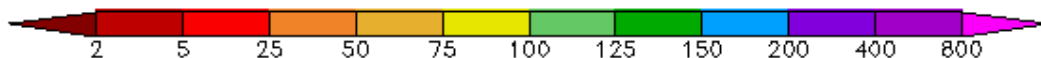


**SNOTEL MTD % of Normal
Precipitation for end of January 2017**
(image is cropped from above image)

Percent of Normal Precipitation (%)
1/1/2017 – 1/31/2017



<http://www.hprcc.unl.edu/maps.php?map=ACISClimateMaps>

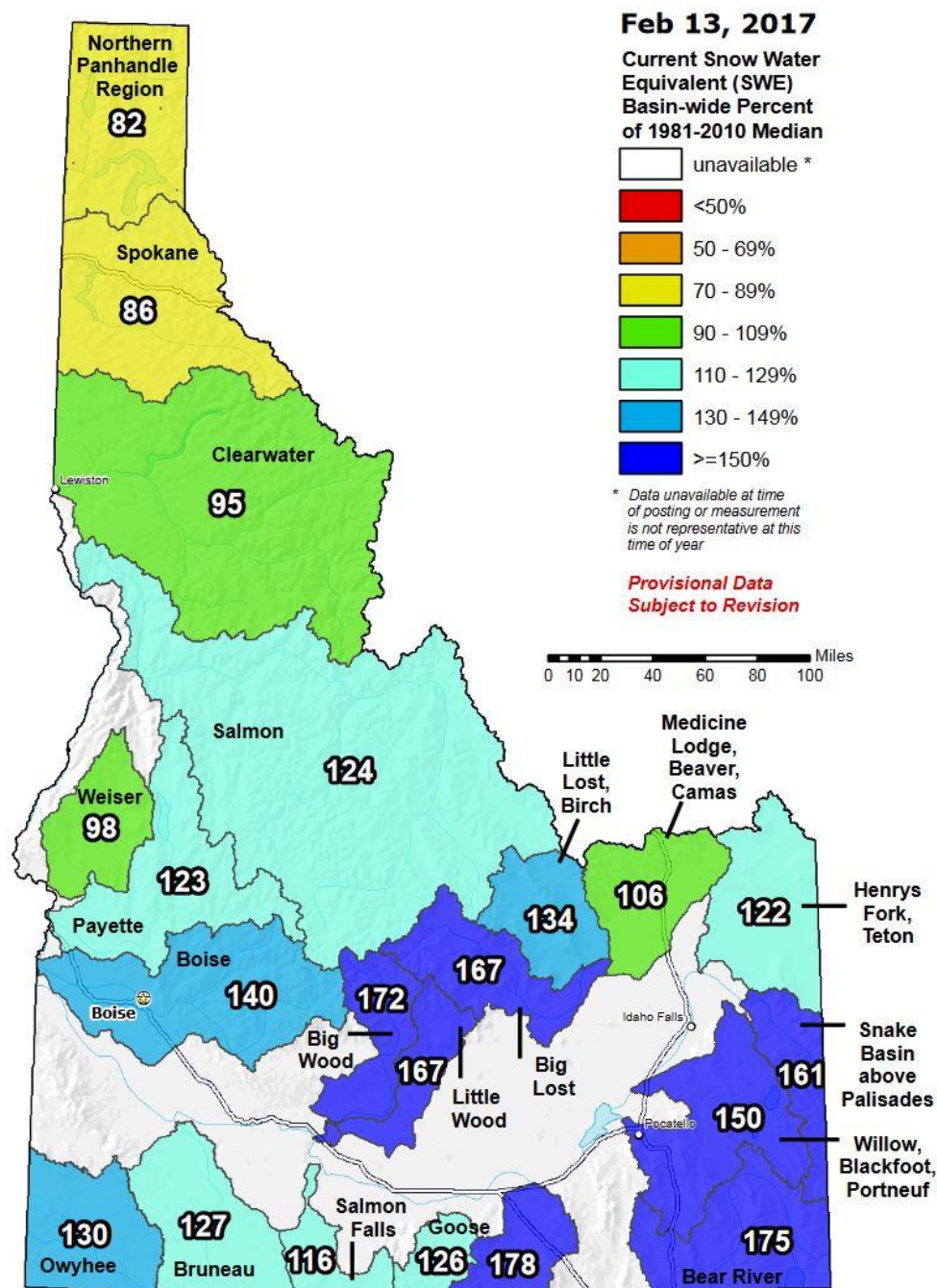


Generated 2/11/2017 at HPRCC using provisional data.

Regional Climate Centers

January continued the well above normal precipitation for most of our area. Most areas received 200 to 400 percent of normal. The Pahsimeroi and Lost River regions saw 150 to 200 percent of normal. Our Northeast region of our forecast area, to include Freemont, Madison, and Bonneville Counties, saw 75 to 125 percent of normal. Teton County saw 50 to 75 percent of normal.

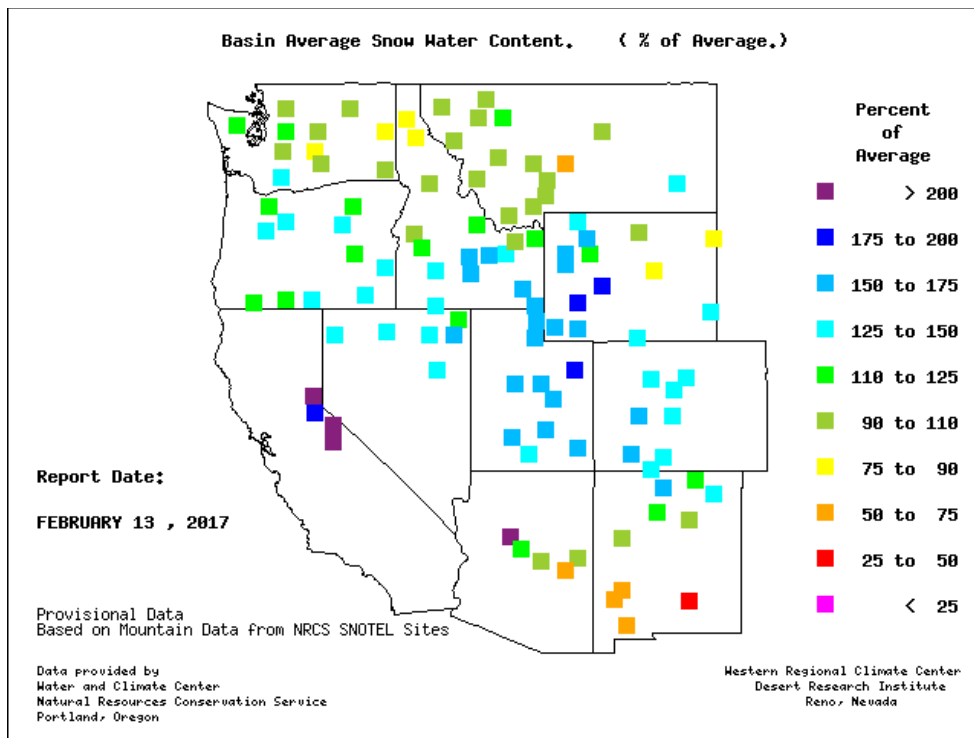
Idaho SNOTEL Current Snow Water Equivalent (SWE) % of Normal



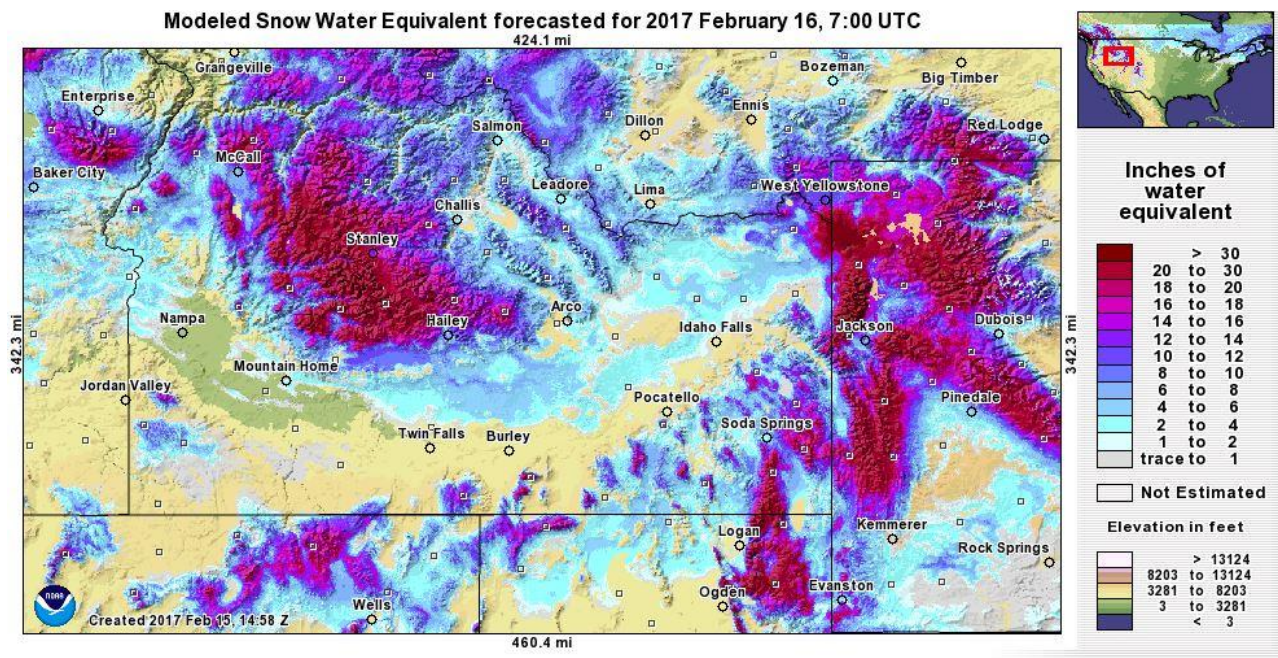
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/id_swepctnormal_update.pdf



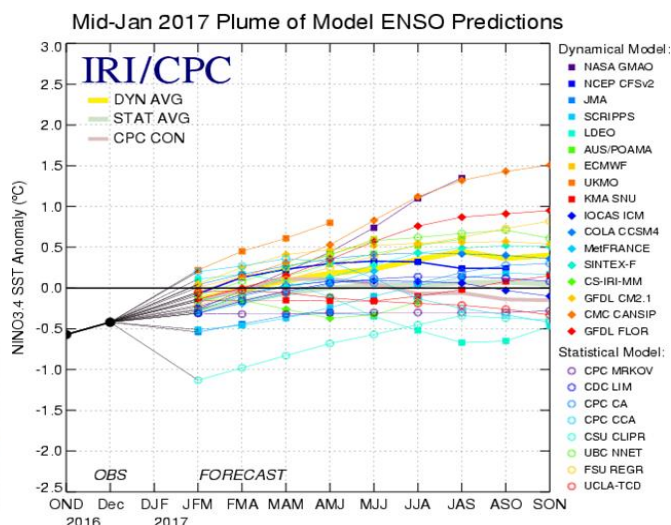
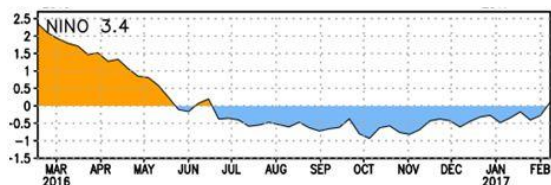
www.wrcc.dri.edu/snotelanom/basinswe.html



www.nohrsc.noaa.gov/interactive/html/map.html

ENSO Update:

Latest Observed SST Departure: Niño 3.4 ~ 0.1 Deg C



www.cpc.ncep.noaa.gov, iri.columbia.edu/climate/ENSO and

CPC Synopsis: ENSO-neutral conditions are present. Enso-neutral conditions have returned and are favored to continue through at least the Northern Hemisphere spring 2017.

Note: Equatorial sea surface (SSTs) are near-average across the central and east-central Pacific. The MJO is active. The Pacific Decadal Oscillation (PDO) is still slightly positive.

Reservoirs:

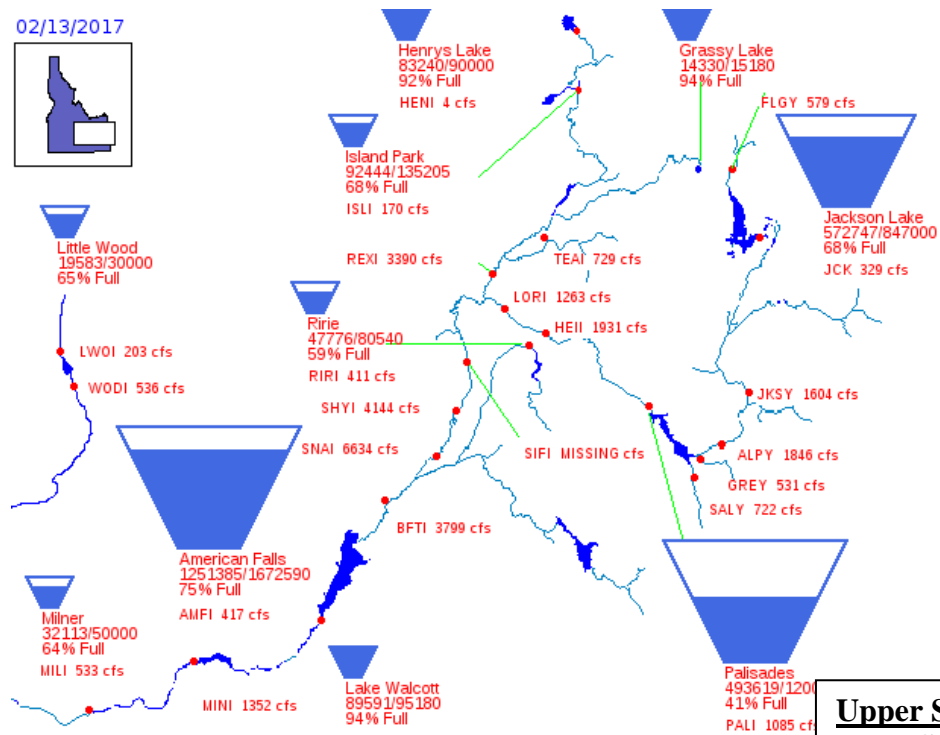
Reservoir	% Capacity December 31 ¹	% Capacity January 31 ²	Percent Change	% of Average ²	% of Average Last Year ²
Jackson Lake	63	66	3	129	131
Palisades	39	46	7	70	87
Henrys Lake	89	91	2	103	96
Island Park	57	65	8	88	97
Grassy Lake	91	93	2	118	110
Ririe	57	60	3	125	118
Blackfoot	62	65	3	125	98
American Falls	52	67	15	100	82
Mackay	77	86	9	148	104
Little Wood	67	79	12	145	70
Magic	44	46	2	127	48
Oakley	21	24	3	81	61
Bear Lake	35	35	0	79	81
Lake Walcott	94 ³	94 ⁴	0	n/a	n/a
Milner	66 ³	64 ⁴	-2	n/a	n/a

Source: (1) NRCS December 31, 2016; (2) NRCS January 31, 2017.

(3) US Bureau of Reclamation (BOR) January 11, 2017 (4) BOR February 13, 2017

http://www.wcc.nrcs.usda.gov/ftpref/support/water/SummaryReports/ID/BRes_1_2017.pdf

02/13/2017

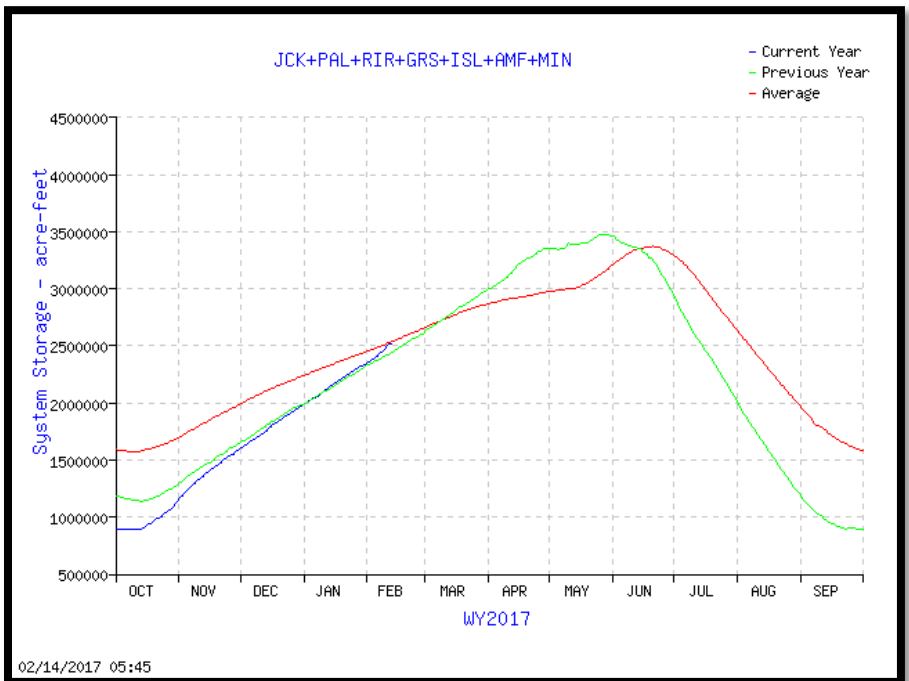


www.usbr.gov/pn/hydromet/burtea.html

**63% of Capacity
in Upper Snake
River System**
(Jackson Lake, Palisades,
Grassy Lake, Island Park,
Ririe, American Falls &
Lake Walcott)

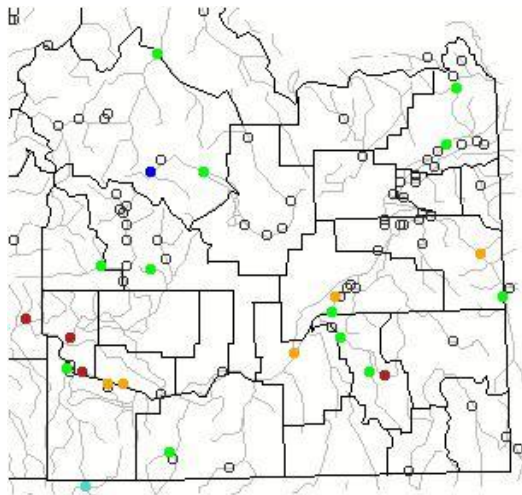
Upper Snake River:
Total Space Available: 1,483,805 AF
Total Storage Capacity: 4,045,695 AF

**Graph of Upper Snake River
Current Total System Reservoir
Storage**



https://www.usbr.gov/pn-bin/graphwy.pl?snasys_af

Streamflow:



Monthly average streamflow compared to historical average streamflow for January 2017.



<https://waterwatch.usgs.gov/index.php?r=id&id=mv01d>

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

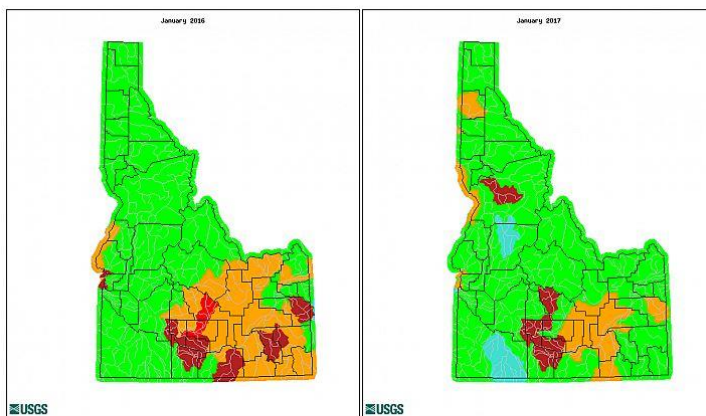
Comparison of Streamflow Maps

Geographic area: Water resource region: GO

Map type: Sub type:

Date (YYYYMM):

Date (YYYYMM):



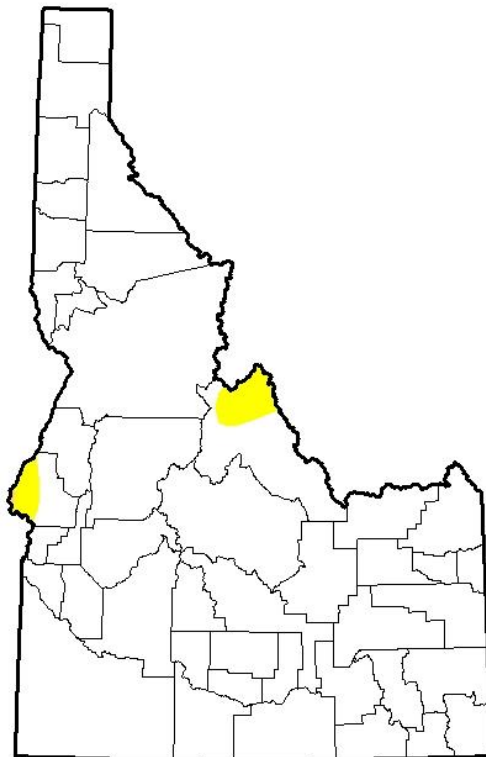
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

http://waterwatch.usgs.gov/index.php?id=wwchart_map2

Drought:

U.S. Drought Monitor Idaho

February 7, 2017
(Released Thursday, Feb. 9, 2017)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	98.13	1.87	0.04	0.00	0.00	0.00
Last Week 1/31/2017	98.13	1.87	0.04	0.00	0.00	0.00
3 Months Ago 11/8/2016	82.66	17.34	1.04	0.00	0.00	0.00
Start of Calendar Year 1/3/2017	89.98	10.02	0.04	0.00	0.00	0.00
Start of Water Year 9/27/2016	6.14	93.86	8.89	0.00	0.00	0.00
One Year Ago 2/9/2016	11.19	88.81	52.81	3.90	0.00	0.00

Intensity

D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought
D2 Severe Drought	

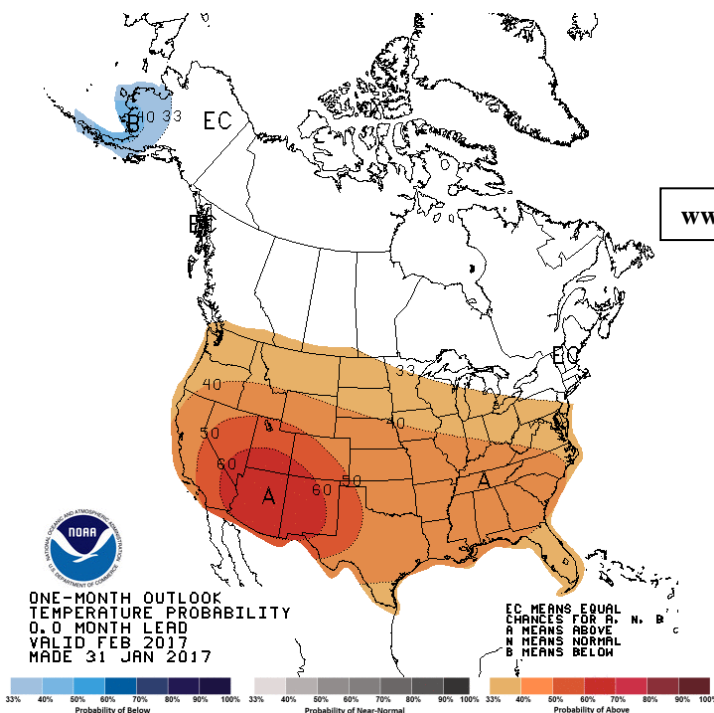
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

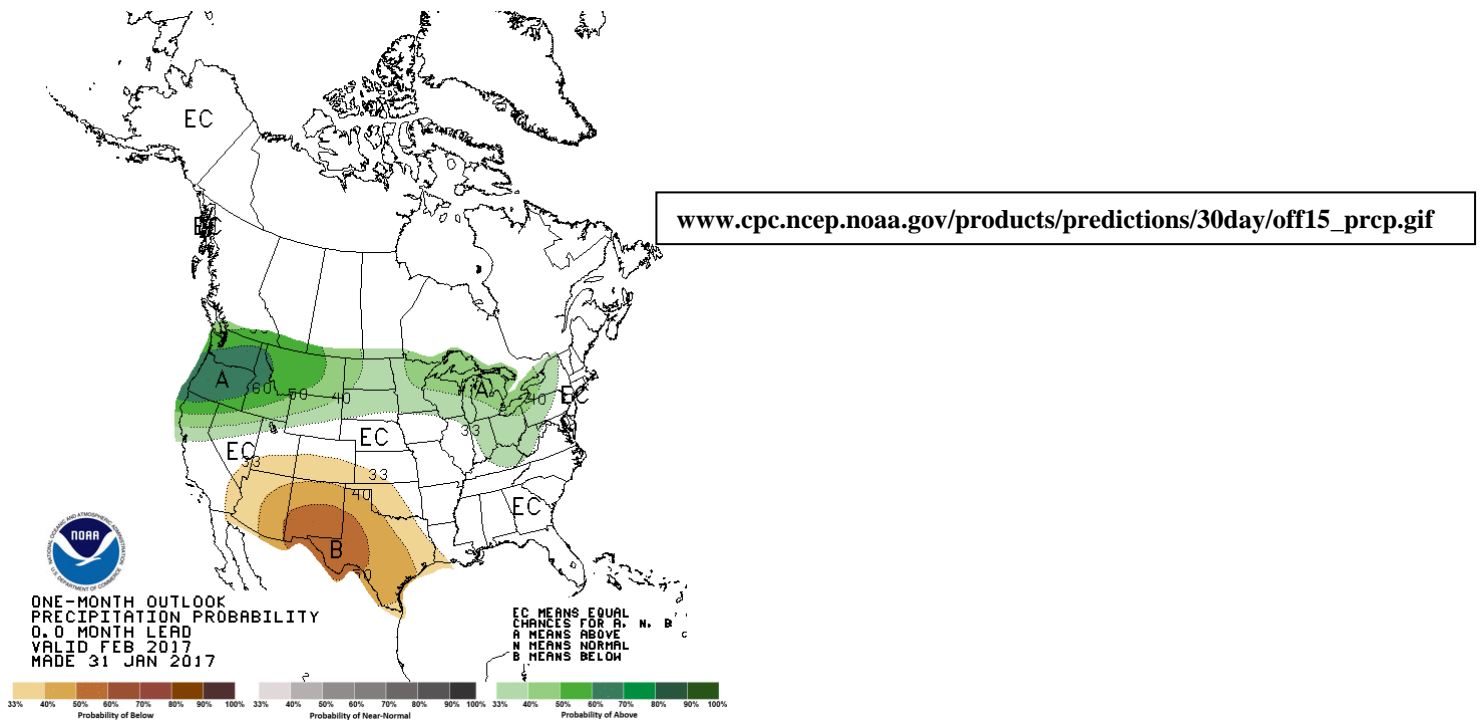
David Simerai
Western Regional Climate Center



<http://droughtmonitor.unl.edu/>



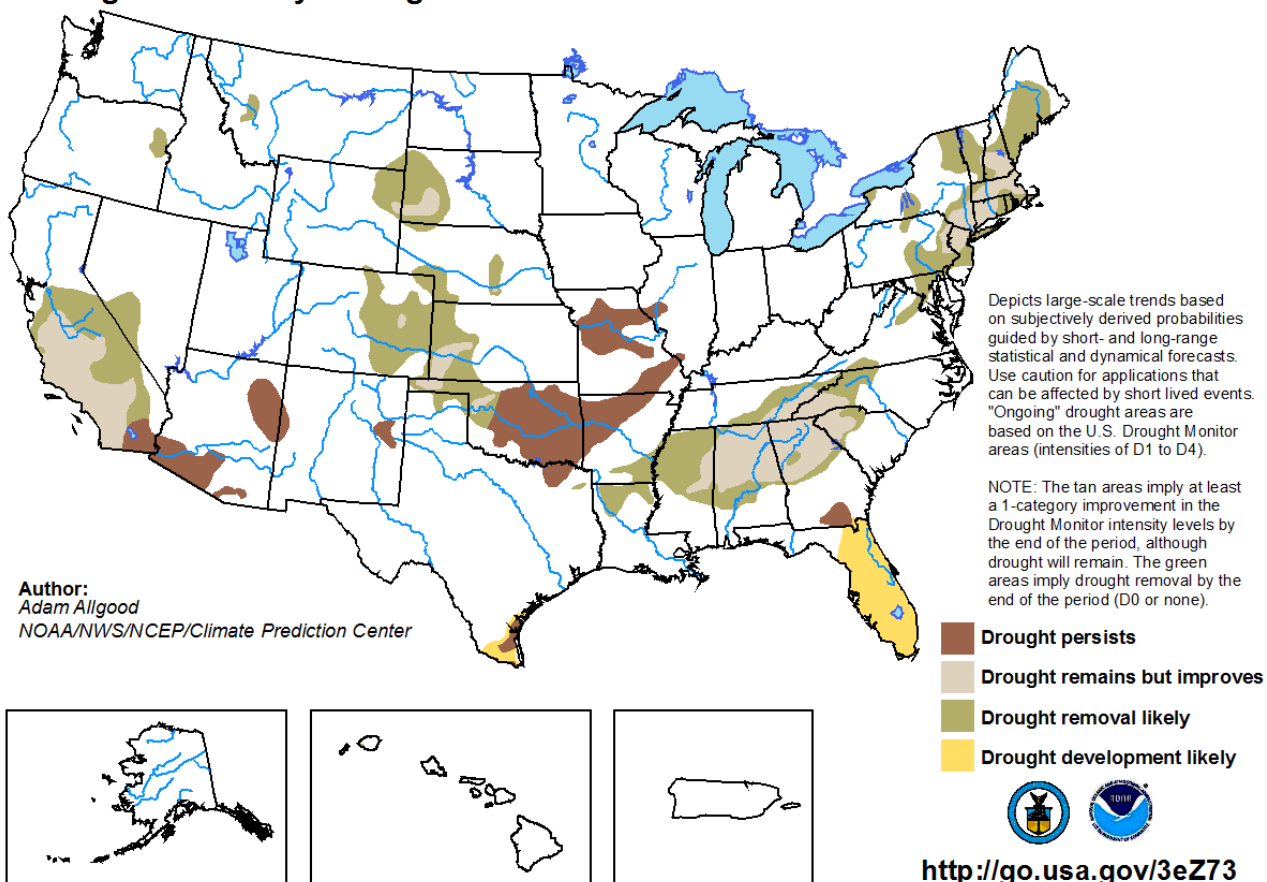
www.cpc.ncep.noaa.gov/products/predictions/30day/off15_temp.gif



U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for January 19 - April 30, 2017
Released January 19, 2017



www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png

cc:

Jeff Zimmerman, Acting Western Region HCSD
Joe Intermill, Hydrologist-in-Charge, Northwest River Forecast Center
Steve King, Service Coordination Hydrologist /Acting DOH, Northwest River Forecast Center
Michelle Stokes, Hydrologist-in-Charge, Colorado Basin River Forecast Center
Paul Miller, Service Coordination Hydrologist, Colorado Basin River Forecast Center
John Lhotak, Development and Operations Hydrologist, Colorado Basin River Forecast Center
Hydrometeorological Information Center
Dean Hazen, Meteorologist-in-Charge, Pocatello, Idaho
Kurt Buffalo, Science and Operations Officer, Pocatello, Idaho
Vern Preston, Warning Coordination Meteorologist, Pocatello, Idaho
Troy Lindquist, Senior Service Hydrologist, Boise, Idaho
Brian McInerney, Senior Service Hydrologist, Salt Lake City, Utah
Kevin Berghoff, Senior Hydrologist, Northwest River Forecast Center
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PIH Mets/HMT (pih.ops)

End

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